REMARKS

Claims have been cancelled herein. These claims have been cancelled to reduce the number of claims to be below 25. Applicants do not concede that any cancelled claim was actually anticipated or rendered obvious by any art cited by the Examiner. Applicants reserve the right to reassert any subject matter cancelled herein in this or subsequent application. Applicants further reserve the right to challenge -- as arbitrary, capricious, and/or unconstitutional -- any USPTO regulations limiting the number of claims they can assert without filing a self-incriminating ESD.

Declarations under rule 131

The present RCE is filed for the purposes of making sure the declarations under rule 131 are of record. As repeatedly stated before, Applicants believe that they were wrongly denied entry previously, and Applicants had not noticed that the regulations had changed requiring appeal from decision on petition to be made within two weeks.

As stated previously:

> Applicants also respectfully submit that the declarations do establish that the invention here was conceived in the summer of 1998 and that the inventors began working on reducing it to practice diligently beginning at the latest in September of 1998. The date of filing of Chang is June of 1999.
>
> There is a provisional application in Chang cited from October of 1998, which is after the date on which Applicants have established that they started diligently working to reduce this to practice. In any case, that provisional application has not been made of record and has not been applied against the

claims – so it is not clear what it teaches or suggests. The date of the provisional application from Chang is therefore not at issue here.

Applicants accordingly respectfully submit that the rule 131 declarations do establish that Chang is not prior art.

Art rejections

The art rejections are respectfully traversed.

Any of the Examiner's rejections and/or points of argument that are not addressed below would appear to be moot in view of the following. Nevertheless, Applicant(s) reserve(s) the right to respond to those rejections and arguments and to advance additional arguments at a later date. No arguments are waived and none of the Examiner's statements are conceded.

The following remarks track the argument in the previously filed appeal brief, edited for the current claim set.

REMARKS

. General comments about terminology in the Chang reference

Applicants note one slightly confusing aspect of Chang. Chang repeatedly uses the acronym "DB2XML." Many people might mistakenly read this acronym as "data base to XML;" however, if one looks carefully at the Chang patent, one can see that this is not what Chang means. At col. 8, line 11, Chang explains that DB2® is the name of a particular type of database, and that the patent relates to XML documents stored in a DB2 database. Therefore, for Chang, "DB2XML" means a DB2 type database containing XML documents. Applicants respectfully submit that reading "DB2XML" from Chang to mean "data base to XML" or to imply conversion from database to XML constitutes impermissible hindsight in light of Applicants' disclosure.

Argument in advisory action

The advisory action asks Applicant to review a section of the background of the invention in the reference at col. 2, lines 61-4. This section of the reference does not refer to a computer method that includes an operation to be executed, where that operation is establishing a mapping between lists and scalars and XML elements and attributes. Instead, this section of the reference relates to conventional manual programming of XML documents. Accordingly, the section fails to overcome the previously presented arguments for validity of the claims.

Claim 1

Claim 1 recites establishing a mapping from lists and scalars corresponding to at least one data source into XML elements and attributes. In these claims, the lists and scalars are mapped

to XML elements and attributes. The XML elements are not themselves the lists and scalars in the data source, as defined in the spec. To the extent that the reader may not understand this recitation, the reader needs to refer to the meaning of the terminology "mapping … into" in the specification. The specification makes clear that this terminology relates to retrieving data from a relational database into an XML document. The lists and scalars are part of a source that needs to be made compatible with XML.

In reading over the reference, the undersigned is just not finding this. The reference talks about a database of XML documents, an extender which describes the XML documents, and DTD's for the XML documents. There is metadata for the XML documents in the database. Data appears to be retrieved out of the database of XML documents. Assuming *arguendo* that there is some mapping it would be *from* XML documents, but not *to* XML elements and attributes. Applicants accordingly respectfully submit that the Examiner mischaracterizes the reference.

Claim 10

This claim recites expressing the mapping in constructs of a mapping language. Against this recitation, the Examiner cites col. 14, line 34 et seq. Applicants respectfully submit that the Examiner mischaracterizes the reference. This section of the reference relates to indexing existing XML documents, not to a mapping language that maps lists and scalars into XML elements and attributes.

More information about the general definition of the term "language" is included in the

previously submitted document from the online encyclopedia "wikipedia.org." According to this definition, "a language is a system of symbols, generally known as lexemes and the rules by which they are manipulated." Applicants do not believe that a mere indexing teaches or suggests a language. In fact, the indexing scheme of the reference appears to chop up XML documents into a table, rather than being a use of constructs of a mapping language.

Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim.

Chang: col. 9, line 11 (claim 90)

This portion of the reference is cited by the Examiner in several places as allegedly showing an annotated the DTD. Applicants respectfully submit that the Examiner has misconstrued the reference. As the Examiner states, DTDid is an integer value identifying a document type definition. This is the name of the DTD, not the contents of the DTD.

Claim 90 recites "inserting the constructs into a DTD to create an annotated DTD," merely creating an identifier for a DTD fails to teach or suggest the limitations of this claim.

Chang: col. 15, lines 50-67 (claim 76)

This claim recites that an XML document generated from the annotated DTD is guaranteed to conform to the DTD. The DTD corresponds to multiple heterogeneous data sources.

REMARKS

The portion of the reference cited by the Examiner starts out "***If*** the XML documents conform to a single DTD.[emphasis added]" Please note the ***if***. Clearly from this text there is no guarantee that the XML documents will conform to the single DTD. It is only happenstance.

The Examiner says that the XML documents are multiple heterogeneous data sources – but the claim says that the XML elements and attributes are supposed to be the target, not the source. Moreover, the XML documents in the reference are all from a single database, not multiple data sources.

Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim and has mischaracterized the reference.

Claim 16

Against this claim, the Examiner cites figs. 11 & 12 and col. 15, line 56 *et seq.* of Chang. First, it should be noted that the text cited by the Examiner does not correspond with the figures cited.

Second Figures 11 and 12 of the reference, described at col. 16, line 56 et seq. relate to indexing XML documents based on tagged words in those documents (Fig. 11) and by structure of the documents (Fig. 12.) They fail to teach or suggest constructs in a DTD, much less constructs that include either a value specification or a binding specification per this group of claims.

Third, the text cited by the Examiner, referring to figures 9 and 10, relates to a structure

index for an XML document database, not to contents of constructs in a DTD.

Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim and has mischaracterized the reference.

Claim 19

This claim recites that a construct comprises a parameter. This is a dependent claim, so reference must be had to the prior claims, which explain that the construct is one that is inserted into a DTD.

Against this recitation, the Examiner cites col. 20, line 63 of Chang. The undersigned has reviewed this portion of Chang and respectfully submits that the Examiner mischaracterizes it. This portion of the reference talks about parameters of a function "xml/FromFile." Applicants see no teaching or suggestion that these parameters have anything to do with constructs of a mapping language that are inserted into a DTD. Instead, the function appears to be in the XML extender (100, Fig. 2), which appears to be an entire suite of programs.

The Examiner further cites col. 22, lines 18-57 as relating to generation of an XML element. Applicants have reviewed this portion of the reference and respectfully submit that the Examiner mischaracterizes it. Applicants find that this portion relates again to retrieving information about of an XML document using "conditional select" rather than generating XML elements and attributes.

The Examiner further cites col. 23, lines 5-51. This section does appear to relate to updating an XML document, but again it appears to use XML extender (100, Fig. 2) rather than

constructs of a mapping language inserted into a DTD, per claim 19.

Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim and misconstrues the reference.

Claim 21

This claim has been amended to make it a method claim, because this RCE only retains method claims, but the limitations previously argued have been retained so that the scope is not changed over the references.

The Examiner refers to col. 22, lines 18-57. This section relates to using parameters in SQL – a query language – to search a database of XML documents. It fails to teach or suggest passing a value to a parameter that is in a construct in a DTD. Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against these claims and misconstrues the reference.

Claim 25

Against these claims the Examiner cites col. 5, line 50 et seq. This section relates to a DTD, but not a DTD construct as defined in the parent claims of this claim. *A fortiori* this section of the reference cannot teach or suggest that data objects or formulae are associated with such a construct. Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim and misconstrues the reference.

REMARKS

Claim 27

This claim has been made into a method claim, for consistency, since only method claims have been retained, but otherwise the limitations previously argued have been retained.

The associating operation of this claim is related to the independent claim 25, where associating operation is further defined as associating lists or formulas with DTD constructs having a repetition symbol.

The Examiner purports to find the "associating operation" of this claim at col. 8, lines 21-42 of Chang. Applicants have reviewed this section and see no teaching or suggestion of associating anything with a DTD construct that has a repetition symbol. Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim and misconstrues the reference.

Claim 28

Against the recitations of this claim, the Examiner cites Chang's col. 5, lines 17-48. This section shows an example of an XML document. The section is also followed by a section that shows document type definitions for the XML document. These type definitions include a #PCDATA's, element lists, and attribute lists.

Applicants do not claim the concept of XML documents or the type definitions per se. These are known from the art. What Applicants claim is associating one or more lists of data objects or formulas producing data objects with DTD constructs, such as shown in the example on page 21.

REMARKS

Applicants accordingly respectfully submit that the portion of Chang cited by the Examiner fails to teach or suggest this claim.

Claims 34

This claim recites first associating one or more lists of data objects or formulas producing data objects with a DTD construct. Examiner purports to find this first associating operation at col 5, l. 50 and col. 9, line eleven of the reference. Applicants respectfully submit that the Examiner misconstrues the reference. Column 5, line 50, et seq. merely shows a DTD. Applicants do not find that it teaches or suggests associating anything with DTD constructs, as that term is defined in the present application and claims.

This claim further recites second associating least one of the lists or formulas with at least one variable name. The examiner purports to find this at column 24, lines 38-66 of the reference. Applicants respectfully submit that the Examiner misconstrues the reference. Applicants have reviewed this section of the reference and understand it to describe searching the XML database. Applicants find no teaching or suggestion of their second associating step.

Claim 37

This claim recites associating at least one environment with an XML element. It is to be noted that "environment" is defined in the specification at page 31, i.e. 'a set of variable/value pairs called the "environment."'

REMARKS

Against this recitation, the Examiner cites Chang, col. 8, lines 31-32. Applicants have reviewed this part of the reference, which refers to creating a table. As far as Applicants can tell, this table stores the XML itself, not variable/value pairs. Applicants accordingly respectfully submit that the Examiner has therefore failed to make a *prima facie* case against this claim.

Claims 40

This claim recites details of the environment. This claim depends from those in the previous group. Against this claim, the Examiner cites col. 15, line 50 through col. 17, line 64. Applicants are totally unable to discern how this large amount of text may be related to an "environment" as defined by Applicants. Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against this claim.

Claim 43

Against this claim, the Examiner cites col. 15, line 25 through col. 16, line 24. This section is entitled "Structure Index for the XML Extender" and describes something called a "structure search" of the XML documents in a database. Applicants see no relationship between this section of the reference and this group of claims.

Applicants have in the first place not found any teaching or suggestion of a mapping, as defined and discussed with respect to claim 1 above. *A fortiori* Applicants find no teaching or suggestion of what might be in such a mapping, such as a specification of a parameter for receiving a value up on generation of an XML document, per this group of claims. It appears

that XML documents are being searched in this part of the reference. Applicants do not understand that XML elements and attributes are being mapped to.

The claim further references the "environment" as discussed with respect to other claims herein, and which Applicants have previously discussed as not being taught or suggested by the reference.

Applicants accordingly respectfully submit that the Examiner has not made a *prima facie* case against this claim.

Claim 84

Against the recitations of this claim, the Examiner cites Chang at col. 16, lines 1-22. Again, this section of the reference relates to a structure search of the database of XML documents. Applicants find no teaching or suggestion here that a user can specify anything with respect to a mapping from lists and scalars to XML elements and attributes. Applicants accordingly respectfully submit that the Examiner has not made a *prima facie* case against this claim and misconstrues the reference.

Claim 87

This claim recites that there are at least two data sources and the sources are of different types. Against this recitation, the Examiner cites elements 500 and 300 in Fig. 3. However, element 500 is the source and element 300 is the target in this figure. They are not both sources.

REMARKS

Accordingly, Applicants respectfully submit that the Examiner has not made a *prima facie* case against this claim.

New claim 97

This claim more clearly defines what an annotated DTD is, which makes it distinguish even more clearly over the reference.

Applicants respectfully submit that they have addressed each issue raised by the Examiner — except for any that were skipped as moot — and that the application is accordingly in condition for allowance. Allowance is therefore respectfully requested.

Respectfully submitted,

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